

# A Guide to Scientific and Scholarly Research in Wrangell-St. Elias National Park and Preserve

## Introduction

National parks protect a tremendous variety of natural and cultural wonders. Mammoth Cave, Glacier Bay, Hawaii's Volcanoes, the wetlands of Everglades, the cliff dwellings of Mesa Verde, the thermal features of Yellowstone, the glaciers and mountains of Wrangell-St. Elias – these and other parks present opportunities for visitors to explore features that often don't exist anywhere else in the world. National parks also present unique opportunities for scientific research. The U.S. National Park Service (NPS) recognizes the scientific value of parks and encourages research when it is consistent with NPS policies.

Over the years, Wrangell-St. Elias National Park and Preserve has served as an outdoor laboratory for a variety of scientists and other researchers. The largest national park in the United States, it encompasses four large river watersheds; four mountain ranges; a unique cross-section of boreal, subarctic and coastal ecosystems; and a wide variety of plants and animals. Much of previous research in the park has focused on geologic processes such as volcanism, glaciation, plate tectonics, and quaternary geology. Its vast glaciers, in particular, have drawn scientists from around the world.

In addition to contributing to scientific knowledge, research in Wrangell-St. Elias also aids park managers. For instance, knowing the location and composition of rare and fragile tundra plants helps park managers protect them from visitors' hiking boots. Much like a physician monitors a patient's heartbeat and blood pressure for diagnostic purposes, National Park Service officials need accurate information about the resources in their care. Specifically, they need to know how and why natural systems change over time, and what amount of change is normal, in order to make sound management decisions. Understanding Wrangell-St. Elias's resources is vital to improving park management and expanding scientific knowledge.

It is the policy of Wrangell-St. Elias National Park and Preserve to allow and encourage research in the natural and social sciences that increases the understanding of natural, cultural, and social processes occurring in or acting upon the greater Wrangell-St. Elias ecosystem. Research will be allowed as long as it can be conducted in a manner that does not threaten or diminish the resources for which the park was established.

## The Research Permit Requirement

**All investigators interested in conducting research in national parks MUST apply for a research permit.**

Whether or not a project receives park funding, all research conducted on federal lands and waters in Wrangell-St. Elias National Park and Preserve must have a research permit. The park research coordinator issues permits to scientists and scholars who inventory, monitor, and study

park resources such as caribou, vegetation, soils, and glaciers. Each proposed project is scrutinized to ensure it does not adversely affect park resources or visitors and will contribute in some way to an understanding of the park. Inappropriate projects, or those lacking scientific validity, are rejected, in order to protect the integrity of park resources.

Prior to issuance of a permit, all research proposals are carefully screened for:

- legality (compliance with federal laws and other regulations as specified in the Code of Federal Regulations);
- appropriateness (compliance with NPS-53, "Permitting and Renewal Considerations");
- contribution to the park's resource management program;
- quality of the research proposal, including peer review and support; and,
- impacts to other park resources, park operations, other research projects, and visitor experience.

This screening process is designed to ensure that park resources and visitors are not unduly affected by the research, to ensure that all investigators are treated fairly, and to allow appropriate tracking and reporting of park research.

## **Who Needs a Research Permit?**

A Scientific Research and Collecting Permit is required for activities pertaining to natural resources, cultural resources, or social science studies in National Park System areas that involve fieldwork, specimen collection, and/or have the potential to disturb resources or visitors.<sup>1</sup> Thus, social science surveys and monitoring sample collection require a research permit, as does more traditional natural and physical science research. If you are planning a social science survey, Office of Management and Budget approval will be required as well, and you will need to allow at least six months to get all the appropriate paperwork processed (see the section of this document on Special Considerations for Social Science Research). If you would like to do archaeological research, there are also additional required permits (see section of this document on Special Considerations for Archaeological Research). You will be advised of what is necessary when you submit your application for a research permit.

Generally, a researcher must be an official representative of a reputable scientific or educational institution or governmental agency. If the researcher is a student, he or she must have an advisor or sponsor, as described above, as the principle investigator.

## **How to Obtain a Research Permit**

Wrangell-St. Elias National Park and Preserve issues research permits as a part of the National Park Service Permit System. This system allows you to apply for a research permit at any national park. To obtain a permit to do research at Wrangell-St. Elias, you must meet all the requirements and follow the instructions provided on the research permits website as well as provide the study plan information described below. Please be sure to review the National Park Service Permit Conditions.

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<sup>1</sup> Projects that take place entirely on non-federal land within the park boundaries do not need a permit.

While the National Research Permits website and the associated instructions mention that permits will be accepted via the internet or in hard copy, Wrangell-St. Elias National Park and Preserve does not have staff to allow hard copy submission. Please use the National Park Service Permit System to apply.

To apply for a permit on the Service's Research Permit and Reporting System (RPRS) web page, go to <http://science.nature.nps.gov/research> and submit the following:

1. An application.
2. A full research proposal or study plan (see the Guidelines for Study Proposals at the same web site as well as the section below regarding what to include in your study plan).

Proposals submitted to other agencies may be photocopied and submitted in partial fulfillment of these requirements. However, the proposed project will receive the quickest review if both the application and the proposal are filed on the research permit website and if the study plan includes all the information described in the section of this brochure on study plans.

## **Research Permit Application Timeline:**

Submit all research permit application paperwork as far in advance as possible to allow time for the review process.

- For projects to take place during the summer (May 15 to September 15), submit your application/renewal by March 15.
- For projects schedule for other times of the year, submit your application/renewal at least two months in advance of your start date.

Permit applications for most projects submitted according to this schedule can be assured of being processed without delaying the project start date. If the research involves access by helicopter, wildlife capture, extensive collections, substantial disturbance, permanent structures, or other issues that may require an environmental assessment, however, allowing more time is advised.

If you can not submit your complete application (with study plan) at least two months in advance of your proposed start date, we will do our best to process the materials quickly, but we cannot guarantee that your proposed research can be reviewed in time to issue a research permit by the date you intended to begin. Again, discussing the project with park staff will increase odds of project approval, decrease time to project approval, and increase project success.

## **What Do I Need to Include in My Study Plan?**

The study plan must describe the objectives and the rationale for working in Wrangell-St. Elias, and provide enough detail about the study locations and methods including logistics so park staff can adequately review the study plan for any administrative or compliance concerns, assess how the proposed project fits in with the overall science goals of the park, and set the conditions of the research permit, if approved and issued. Projects are evaluated for impacts, not scientific

merit; however, project information will be valuable to the park if the science is sound. Potential researchers are encouraged to discuss their proposals and field sites with an appropriate staff member and to ask for current information that could enhance their studies.

Reviews of research projects will be more likely to be positive, with quick turn-around times, if researchers...

- Follow the guidelines for proposals given on the RPRS website.
- Provide adequate justification for why the project should be conducted in Wrangell-St. Elias and not elsewhere.
- Provide maps, coordinates, or both indicating specific location(s) of proposed study sites or fieldwork.
- Provide clear description of methods.
- Provide clear and detailed descriptions field logistics and impacts, including the means of arriving at the site location, the nature of anticipated on-site activities, the duration of these activities, the number of people and kinds of equipment expected on site, camp locations and durations, and a general summary of the total impacts to the resource anticipated by the actual on-site activities.<sup>2</sup>
- Access the park via road, fixed-wing aircraft, foot or horseback. Permission for helicopter access is generally only granted in accordance with the park's helicopter use policy, and adequate justification must be provided before such permission will be granted.
- Obtain in advance any special state or federal permits as required for work with sensitive species or in sensitive areas, including aquatic resource sampling permits from the Alaska Department of Fish and Game, if necessary.
- Have considered minimum tool and minimum requirements according to the Wilderness Act and associated regulations for any proposed activities in Wilderness.
- Plan no permanent structures.
- Limit or avoid digging, other ground disturbing activities, and collecting.
- Present idea(s) for an educational component to the project.

## **Park Research Preferences:**

Park managers and research specialists are particularly interested in learning more about the following topics in Wrangell-St. Elias National Park and Preserve:

Basic Inventory of vertebrate and invertebrate fauna as well as vascular and non-vascular plants. (Some inventory work has been done, but there is still much to be done.)

Specific research needed:

Lichen and bryophyte inventory

Factors affecting lake drying

Climate change

Ecology of marine-derived nutrients in lakes and streams

Relationship between beaver and salmon habitat

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<sup>2</sup> If you are submitting a research or study plan that does not have a clearly identified description of field logistics and impacts, please include such a description as an appendix or attachment to the study plan.

## Collecting Specimens and Samples in Wrangell-St. Elias:

Researchers wishing to collect specimens or samples in Wrangell-St. Elias must make a specific request to do so in their research permit application, and if permission to do so is granted must comply with National Park Service policies and procedures regarding collections. Collecting permits may be granted for limited collecting of objects, whole organisms, or parts of organisms (e.g., leaves). Some animals may be collected and released after they have been measured or tagged. Detailed information about the requirements for collecting and curatorial responsibilities will be provided to researchers who are granted collecting permits (see the “Conditions” section of the permit). Some of the highlights include the following:

- Researchers must describe proposed collections (what, size, number, etc.) in the research permit application and may only collect as authorized in their permit.
- Specimens that are not destroyed remain the property of the National Park Service (NPS) and are cataloged into Wrangell-St. Elias National Park and Preserve’s museum collection using the National Park Service’s Automated National Catalog System. They must bear NPS accession and catalogue numbers.
- Arrangements must be made in advance in order for specimens to leave the park and be stored elsewhere. Non-NPS storage repositories must meet curatorial standards before they will be approved.
- If the specimens will be housed at a non-NPS repository, the Curator’s office will issue a loan agreement form to be signed by the individual responsible for the specimens. NPS policy requires that long-term loans be renewed every 10 years.
- If you wish to send specimens (or their progeny or derivatives) to a colleague outside your own laboratory for further analysis, your colleague must complete a Material Transfer Agreement with Wrangell-St. Elias National Park and may also be required to apply for a Scientific Research and Collecting Permit. No materials can be transferred until the appropriate paperwork has been completed.

## Researcher Obligations:

- Contacting the park: Researchers with approved research and collecting permits should contact the park research coordinator to confirm the dates they will be in the park and check in with the research coordinator or district ranger (as specified in the permit conditions) upon arrival.
- Safety: To make the research experience safe for researchers and others and to ensure the protection of the park resources, researchers may be required to complete appropriate safety orientations at the park prior to field work. These safety orientations may include topics such as bear safety (for day hiking and overnight stays) and backcountry Leave No Trace ethics (for backcountry camping).
- Investigator’s Annual Report (IAR): Each researcher reports results in an Investigator Annual Report each year the permit is active. Anyone can access and read IARs for projects conducted in Wrangell-St. Elias and all national parks by going to the website <http://science.nature.nps.gov/research>. The website allows viewers to sort these reports by park, year, or investigator.

- Publications or final reports: In addition to yearly IARs, researchers should supply the park with copies of any publications, dissertations, theses, or reports resulting from the research conducted at Wrangell-St. Elias.
- Educational component: Researchers should also include an educational component in their projects to help share information with others. There are unlimited options for the format or approach of the educational component. Examples include giving a program for a general park audience, developing a research-based curriculum for classroom or website use, providing text and photos for fact sheets, posters, or brochures, and creating other media.
- Collected specimens and loans: Collection of specimens must be specifically authorized, and researchers obtaining such authorization must comply with special permit conditions associated with collections.

## **Special Considerations for Social Science Research**

If you plan to conduct social science surveys in Wrangell-St. Elias National Park and Preserve, or in any unit of the National Park Service, you may need to obtain clearance for your survey instrument from the Office of Management and Budget (OMB) in addition to obtaining a research permit from the park. Additional information on the conducting social science surveys and interviews in national parks, including when OMB clearance is needed, can be found on the NPS Social Science Program web page (<http://www.nature.nps.gov/socialscience/survey.cfm>).

## **Special Considerations for Archaeological Research**

All research on the archeological resources of Wrangell-St. Elias National Park and Preserve must be done under an approved research permit. Activities having an affect or potential to affect cultural resources are considered “undertakings” and are governed by the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), as amended and the Archeological Resources Protection Act (ARPA), as amended.

For additional information about research involving archaeological, historic or other cultural resources in Wrangell-St. Elias, please contact:

Cultural Resource Management Specialist  
Wrangell-St. Elias National Park and Preserve  
P.O. Box 439  
Copper Center, AK 99573  
(907) 822-7237

## **For more information:**

Research Coordinator  
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